

Water Quality Standards - CWA and Porter-Cologne An Overview

California History

- The California Constitution of 1879 included Article XIV, entitled "Water and Water Rights," and Article XV, "Harbor Frontages, Etc"
- 1884 Edwards Woodruff v. North Bloomfield Mining and Gravel Company-Sawyer Decision
- 1913 The Water Commission Act created California's first water rights governing agency, the State Water Commission

California History (cont.)

- 1949 the Dickey Water Pollution Act created a "State Water Pollution Control Board."
- 1952 McKee & Wolf "Water Quality Criteria" Published
- 1956 The State Water Rights Board and the Department of Water Resources were created
- 1963 2nd Ed. McKee & Wolf "Water Quality Criteria" Published

California History (cont.2)

- 1967 "State Water Quality Control Board" and "State Water Rights Board" were merged and became "State Water Resources Control Board"
- 1969 Porter Cologne Water Quality Control Act
- 1971 "Interim" Water Quality Control Plans
- 1975 Water Quality Control Plan Adopted

Statutory Authority to Protect Water Quality

- U.S. Environmental Protection Agency
 - Federal Water Pollution Control Act (Clean Water Act)
 - Found in 33 United States Code
- California Water Boards
 - Porter-Cologne Water Quality Control Act
 - Found in Division 7 of the California Water Code
 - Delegated authority from U.S. EPA to implement the Clean Water Act

Water Quality Standards

Federal Clean Water Act—

- Provisions of state or federal law
- Designated use or uses for waters of the United States and
- Water quality criteria for such waters based upon such uses
- Antidegradation policies included

[40 CFR 130.2(c) and 131.3(i)]

The Clean Water Act

- Objective: “restore and maintain the chemical, physical and biological integrity of the Nation’s waters”
- Interim goal: “water quality which provides for the protection and propagation of fish, shellfish and wildlife and provides for recreation in and on the water”, wherever attainable

Clean Water Act: History

- Rivers and Harbors Act of 1899
 - permits
- Water Pollution Control Act of 1948
 - technical assistance to states
- Water Pollution Control Act of 1956
 - financial assistance to states for treatment plants
- Water Quality Act of 1965
 - first federal water quality standards program, for interstate water
- Clean Water Restoration Act of 1966
- Federal Water Pollution Control Act Amendments of 1972 (Clean Water Act)

Clean Water Act: Provisions

- Section 101 - Goals and Policy
- Section 301 - Technology Based Effluent Limits
- Section 302 - Water Quality Based Effluent Limits
- Section 303 - WQ Standards and Implementation
- Section 304 - Information and Guidelines
- Section 305 - Water Quality Inventory
- Section 306 - National Performance Standards
- Section 307 - Toxics and Pretreatment Standards
- Section 308 - Inspection, Monitoring and Entry 9

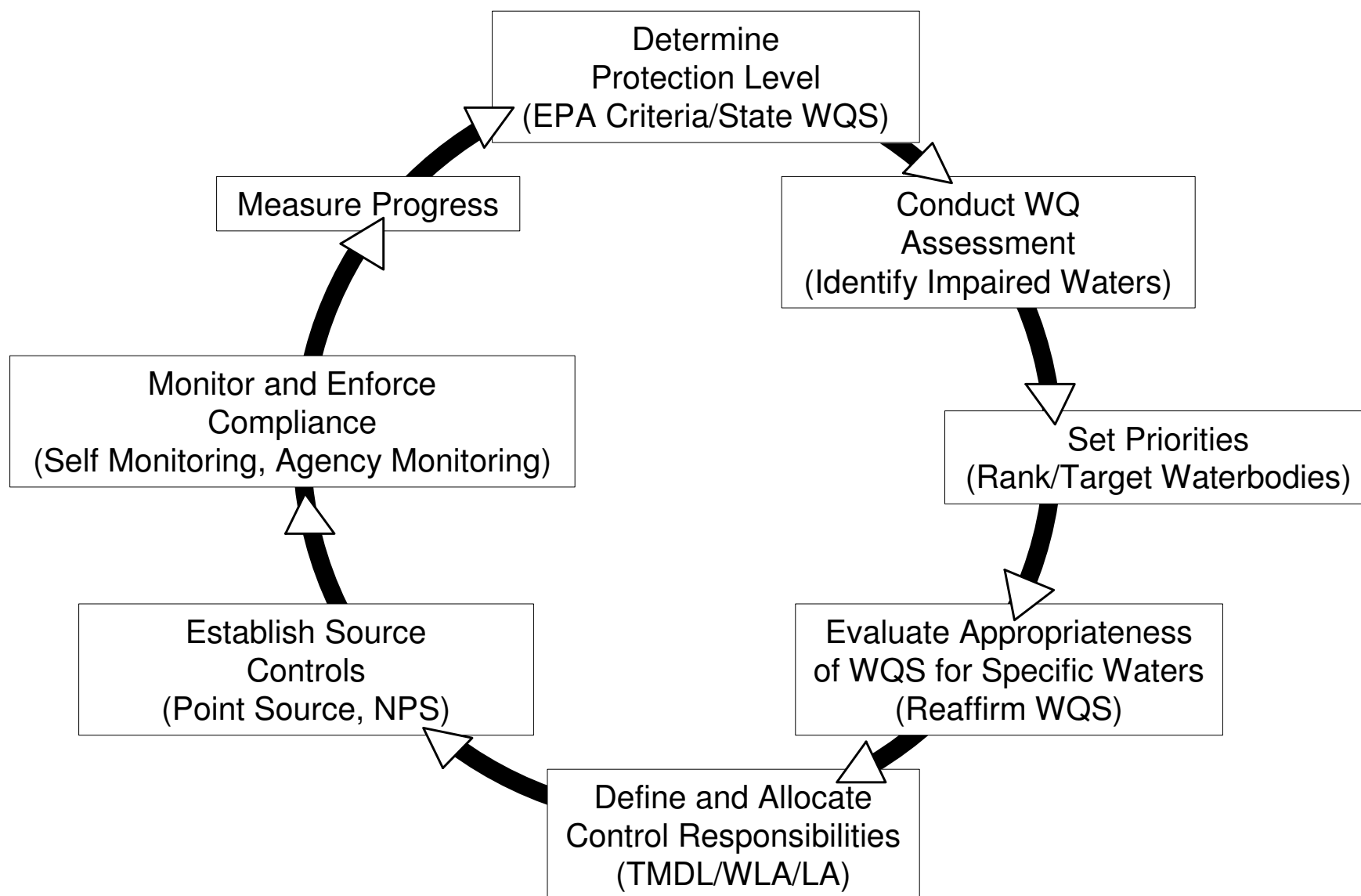
Clean Water Act: Provisions (cont.)

- Section 316 - Thermal Discharges
- Section 319 - Nonpoint Source Management
- Section 320 - National Estuary Program
- Section 401 – State/Tribal Certification
- Section 402 - Point Source Permitting (NPDES)
- Section 404 - Dredge and Fill Permitting
- Section 505 – Citizen Suits
- Section 510 – State/Tribal Authority
- Section 516 - Reports to Congress
- Section 518 - Indian Tribes

CWA: Technology Based Approach (Section 301)

- Effluent limits for industrial dischargers to surface waters and Publicly Owned Treatment Works (POTWs)
- Effluent Limits for Publicly Owned Treatment Works (“secondary treatment”)
- Based on performance of treatment and control technologies, not impacts to receiving waters

Water Quality Based Approach



What are Laws?

- Passed by Congress, signed by the President
- ***Passed by the Legislature, signed by the Governor.***
- Published in the United States Code (U.S.C.) (<http://www.gpoaccess.gov/>)
- ***Published in the California Codes*** (<http://www.leginfo.ca.gov/calaw.html>)
- Clean Water Act is 33 U.S.C. 1251-1587
- ***Porter-Cologne is California Water Code Division 7***

What are federal regulations?

- Have the force and effect of law
- A “must”
- Involves “notice and comment” rulemaking
- May involve Office of Management & Budget (OMB)
- Agency develops rationale and proposed regulation and publishes it and requests comment in the Federal Register (FR):
<http://www.regulations.gov>

What are federal regulations?

- Agency considers all comments, revises proposed regulation accordingly, and publishes final rule
- Once regulation is published in Federal register as a Final Rule, it is Codified by being published in the Code of Federal Regulations (CFR)
(<http://www.gpoaccess.gov/>)

What are federal regulations?

- 50 volumes in the Code of Federal Regulations, called Titles, each focused on a particular subject
- Almost all environmental regulations are at Title 40 “Protection of Environment”
- <http://www.gpoaccess.gov/>
- Basis for disapproval of water quality standards

What is Federal Guidance or Policy?

- “should”
- notice and comment not required
- not binding on Agency or Public
- may involve OMB Review
- not a basis for disapproval
- Governed by section 553 of the Administrative Procedure Act: <http://www.archives.gov>
- example: <http://www.epa.gov/waterscience/standards/policy.htm>

Water Quality Standards

(see 40 CFR 131.3)

- Provisions of State/Tribal (or Federal) Law
 - Designated Uses
 - Criteria to protect those uses
 - Antidegradation policy

- Water Quality Standards are to:
 - Protect public health or welfare
 - Enhance the quality of the water
 - Serve the purposes of the Act

Water Quality Standards, cont'd

(see 40 CFR 131.3)

➤ Water Quality Standards

- Establish water quality goals for a waterbody
- Provide a regulatory basis for controls beyond technology-based limits

Water Quality Standards

- Designated Uses (40 CFR 131.10)
- Criteria to protect those uses (40 CFR 131.11)
- Antidegradation Policies + Implementation Procedures (40 CFR 131.12)
- Implementation Policies (40 CFR 131.13)

Designated Uses (40 CFR 131.10)

- Protection and propagation of fish, shellfish and wildlife
- Recreation in and on the water
- Public water supply
- Agriculture
- Industry
- Navigation
- Others

Beneficial Uses of Waters of the State

California Water Code § 13050(f)

- **Beneficial uses of the waters of the state that may be protected against water quality degradation include, but are not necessarily limited to**
 - **domestic, municipal, agricultural and industrial supply;**
 - **power generation;**
 - **recreation;**
 - **esthetic enjoyment;**
 - **navigation; and**
 - **preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.”**

Beneficial Uses

- Porter-Cologne Act (California term)
- Uses of water
to be protected against degradation
- Found in Water Quality Control Plans
- Groundwater and Surface Water

Protected Uses

- Federal
 - Designated Uses
- California
 - Beneficial Uses

Limits to Protect Uses

- Federal
 - Water Quality Criteria
- California
 - Water Quality Objectives

Water Quality Criteria

- Federal Clean Water Act (surface water)
- Levels of water quality that support particular uses
- CWA Section 303(c) Criteria
 - Enforceable limits under CWA (promulgated)
 - California Toxics Rule & National Toxics Rule
- CWA Section 304(a) Criteria
 - Advisory to states and tribes
 - National Recommended Water Quality Criteria

Water Quality Criteria

(40 CFR 131.3, 131.11)

- Discussed in Sections 304(a) and 303(c) of the Act
- A concentration, level or narrative statement
- Represent a level of water quality that supports a particular use
- When criteria are met, water quality will protect the designated use

Water Quality Criteria

1 Word – 2 Meanings

- Scientifically defensible guidance developed and published by EPA per CWA § 304(a)
 - Basis for Federal promulgation when necessary
- Adopted part of State/Tribal WQS
 - Section 303(c)

Water Quality Objectives

California Water Code §13050(h)

- Limits or levels of water quality constituents or characteristics
- Established for the
 - Reasonable protection of beneficial uses of water or
 - Prevention of nuisance within a specific area
 - Also in CWC §13241

Water Quality Objectives

- Porter-Cologne Act (California term)
- Found in Water Quality Control Plans
- Groundwater and Surface Water
- Same legal status as
CWA Section 303(c) water quality criteria

Water Quality Objectives

California Water Code §13241

- Factors to be considered:
 - Past, present, and probable future beneficial uses
 - Environmental characteristics of the hydrographic unit, including the quality of water available thereto
 - Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area
 - Economic considerations
 - Need for developing housing within the region
 - Need to develop and use recycled water

Antidegradation Policies (40 CFR 131.12)



General policies (40 CFR 131.13)

- States and authorized tribes may include in their standards policies affecting application and implementation, such as:
 - Mixing zones
 - Low flows
 - Variances
- Subject to EPA review and approval

WQS: States and Authorized Tribes

- Have the primary authority to adopt, review and revise water quality standards (Section 303(c) of the CWA)
- May adopt standards more stringent than recommended by EPA (Section 510 of the CWA)
- May certify Federally licensed activities that result in discharge to waters of the US (Section 401 of the CWA)

State/Tribal Submittal Must Include:

(40 CFR 131.20(c))

- Use(s) for each waterbody
- Criteria sufficient to protect those uses
 - With methodologies for any site specific criteria
- An antidegradation policy and implementation methods consistent with 40 CFR 131.12
- Certification that the standards were duly adopted according to state or tribal law
- Other general supporting information

Federal Promulgations (40 CFR 131.22)

- If EPA disapproves AND
- If state or tribe does not adopt specified changes within 90 days...
- THEN the EPA Administrator must promptly propose and promulgate a replacement standard
- OR in any case where the Administrator determines new or revised standards are necessary to meet the requirements of the CWA

Waters of the U.S.

- Used or maybe susceptible for use in interstate or foreign commerce
- Interstate Waters
- Other waters, the use, degradation or destruction of which could affect such commerce
- Impoundments of waters so defined
- Tributaries of the above
- the Territorial Sea
- Wetlands adjacent to the above

Waters of the US (2)

- 3 miles: Territorial Seas - State/Tribal WQS apply
- 24 Miles: Contiguous Zone
- 200 Miles: Exclusive Economic Zone

Water Quality Standards In California

- Found in the
Water Quality Control Plans
(Basin Plans)
- Adopted by
 - State Water Resources Control Board
 - 9 Regional Water Quality Control Boards

Water Quality Standards In California

Water Quality Standards include

- **Beneficial Uses**
for each water body or portion thereof
- **Water Quality Objectives**
(criteria) to protect uses

Porter-Cologne Act also requires

- **Implementation Programs**
to achieve the objectives

Where Do Water Quality Standards Apply?

- Waters of the United States (Federal)
 - Navigable surface waters and their tributaries
- Waters of the State (California)
 - Include both surface waters and groundwater
 - Very broadly defined

Enforceable Water Quality Standards

➤ Federal

- 303(c) Water Quality Criteria (promulgated)
+ Designated Use or Uses

➤ In California

- Water Quality Objectives
+ Beneficial Use designations
or
- CTR or NTR Criteria
+ Beneficial Use designations

Waste Discharge Permitting

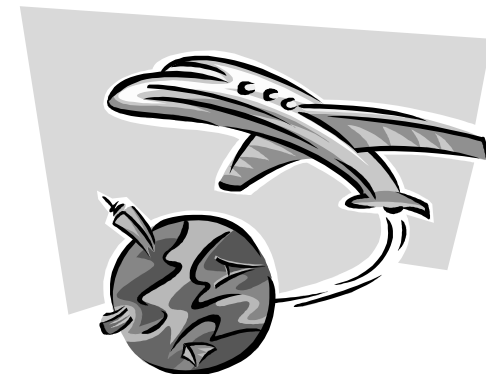
➤ Federal

- National Pollutant Discharge Elimination System (NPDES) Permits

➤ California

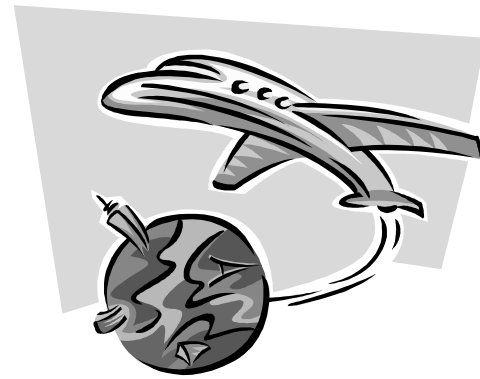
- Waste Discharge Requirements
 - WDRs for discharges to Waters of the U.S.
= NPDES Permits

Overview: Take Home Messages



- **States, Territories and Authorized Tribes have important and unique roles in developing, adopting, reviewing and approving water quality standards.**
- **The Clean Water Act features both Technology Based and Water Quality Based approaches to pollution control.**
- **The Act itself, and regulations developed by notice and comment rulemaking, are the basis for EPA's review and approval of adopted state and tribal water quality standards.**

Overview: Take Home Messages (2)



- **The Clean Water Act establishes a national goal of “water quality which provides for the protection and propagation of fish, shellfish and wildlife and provides for recreation in and on the water”, wherever attainable**